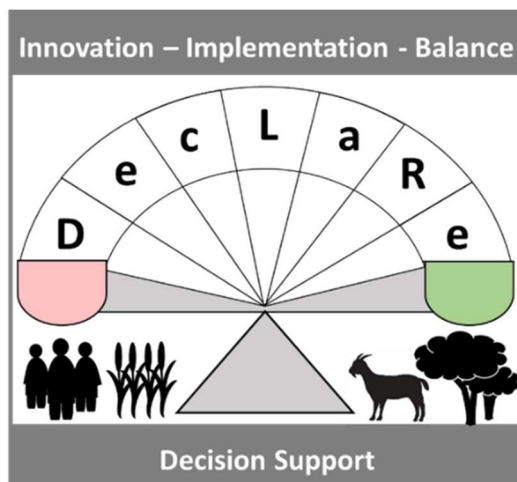


## ***DeLaRe* offers 9 PhD Fellowships for West African candidates**

- **pending availability of funding by the German Federal Ministry of Education and Research (BMBF) -**

(Fieldwork in Ghana and/or Benin)



## **CALL FOR APPLICATIONS**

**Application Deadline:** 28.06.2022

**Fellowship Start:** 01.09.2022

### **Project description**

Sustainable land management is increasingly important to maintain the fragile balance between human demands and ecosystem services of available natural resources, to enhance food security, to reduce the risk of conflicts, and to foster adaptation to climate change. *DeLaRe* is a project funded by the German Federal Ministry of Education and Research (BMBF) and aims to identify recommendation domains for scalable innovations towards sustainable crop production and animal husbandry in West Africa. Focussing on northern Benin and Ghana *DeLaRe* builds on available local and scientific knowledge and databases. It combines their use with problem-oriented research at the field level and modelling at the national to regional level. *DeLaRe*'s ultimate goal is to construct a decision support system (DSS) that can be used for land use and land management as well as for policy development. In this context, the project will employ nine West African PhD candidates, who will be affiliated to one of the three West African *DeLaRe* partners: University for Development Studies (UDS, Ghana), University of Parakou (UP, Benin), and the West African Science Service Centre on Climate Change and Adapted Land Use (WASCAL, Burkina Faso).

## **PhD topics**

### **(1) GIS/Remote Sensing**

Implementation of a spatial decision support system for sustainable crop production and animal husbandry in West Africa. This will include (i) analysis of weather and climate data for spatial decision support, (ii) assessment of existing spatial decision support system (SDSS) frameworks, (iii) proposition of a suitable SDSS to facilitate the integration of the project data, and (iv) contribution to the setup of the SDSS.

1. Supervisor: Dr. Kwame Oppong Hackman, WASCAL Competence Center, Burkina Faso
2. Supervisor: Prof. Dr. Ludger Herrmann, University of Hohenheim, Germany

### **(2) Soil Science/Soil Fertility**

Assessment of nutrient management approaches in different cropping systems of Northern Ghana and Benin, including optimum micronutrient levels and delivery methods. The field research should lead to technology development towards supporting farmers' decision-making to boost sustainable crop production.

1. Supervisor: Dr. Vincent Avornyo, University for Development Studies (UDS), Ghana
2. Supervisor: Prof. Dr. Andreas Bürkert, University of Kassel, Germany

### **(3) Agronomy/Agroforestry**

Assessment of current land use systems (*status quo*) and testing of agroforestry-based innovations with a focus on biophysical components (microclimate, water). Data collection will be based on surveys, farm inventories and field measurements in Ghana and Benin.

1. Supervisor: Dr. Oblé Neya, WASCAL Competence Center, Burkina Faso
2. Supervisor: Dr. habil. Sophie Graefe, University of Kassel, Germany

### **(4) Livestock Sciences**

The study aims at (i) analyzing the relation between land access rules and use rights and communal grazing land productivity and ecosystem services, (ii) assessing the effect of land tenure systems and management types on cycling of carbon, nutrients and water and on plant biodiversity using indicator-based approaches at the field, farm and regional scale, and (iii) develop scenarios for improved rangeland management, increased animal performance, secured livelihoods and reduced C and N emissions per unit of product.

1. Supervisor: Assoc. Prof. Dr. Rodrigue V. Cao Diogo, University of Parakou, Benin
2. Supervisor: Prof. Dr. Eva Schlecht, University of Kassel, Germany

### **(5) Food Technology (Ghana)**

Assessment of (i) household food diversity, nutrition and security, (ii) consumer perception (cost, safety and quality control) of dairy products, and (iii) food product development and analysis. The methods involved will be picture-based food diaries, food security index (FSI), nutrient intake, household dietary diversity score (HDDS), food consumption score (FCS), formulation of food products and laboratory analysis.

1. Supervisor: Dr. Ir. Linda Dari, University for Development Studies, Ghana
2. Supervisor: Prof. Dr. Daniel Mörlein, University of Göttingen, Germany

## **(6) Food Technology (Benin)**

Assessment of (i) household food diversity, nutrition and security, (ii) consumer perception (cost, safety and quality control) of dairy products, and (iii) quality and safety of milk and dairy food developed under different feeding techniques. The methods involved will be picture-based food diaries, food security index (FSI), nutrient intake, household dietary diversity score (HDDS), food consumption score (FCS), formulation of food products and laboratory and sensory analysis.

1. Supervisor: Dr. Ir. Carole Sossa, University of Parakou, Benin
2. Supervisor: Prof. Dr. Daniel Mörlein, University of Göttingen, Germany

## **(7) Land Use & Climate Change**

Assessment of barriers and promoters of sustainable land management and analyzing land right incentives for sustainable investments to support scenario building on the role of land governance. This will include (i) household surveys for data collection on land tenure security and nutrition, (ii) organization of workshops and participatory exercises on mental models from households on sustainable land management practices, and (ii) design of participatory scenario planning based on the mental model results.

1. Supervisor: Dr. Oblé Neya, WASCAL Competence Center, Burkina Faso
2. Supervisor: Prof. Dr. Christoph Gornott, Potsdam Institute for Climate Impact Research, Germany

## **(8) Development Economics**

Econometric analysis of households' land tenure, agricultural production, and nutrition. The data base is a household panel survey with two waves that will be implemented in Ghana as part of the project.

1. Supervisor: Prof. Dr. Seidu Al-Hassan, University for Development Studies, Ghana
2. Supervisor: Dr. Kati Krähnert, Potsdam Institute for Climate Impact Research, Germany

## **(9) Ethnography**

In a context of major changes in land use and tenure security, and innovations in agro-pastoral areas, this study examines the social dimension of sustainable land management in rural Benin. It will mobilize ethnographic long-term field research tools to (i) assess the barriers and promoters of sustainable land management, (ii) understand the role of land governance for sustainable land management, and (iii) analyse communal land use for resource conservation.

1. Supervisor: Assist. Prof. Dr. Georges Djohy, University of Parakou, Benin
2. Supervisor: Prof. Dr. Nikolaus Schareika, University of Göttingen, Germany

## **What We Offer – PhD Fellowships**

The PhD candidates will be supervised by a tandem of West African and German faculty, and will be given the opportunity to pursue a PhD degree at one of the *DeclaRe* partner Universities in Germany (University of Kassel, University of Göttingen, University of Hohenheim, PIK). PhD candidates will benefit from a training program comprising courses on academic writing, scientific ethics, statistics, and integrated modeling, which are either given as post-workshop seminars in West Africa or in digital format.

The PhD fellowship will be awarded in four consecutive periods of 12 months (total of four years), and will cover a country-specific monthly living allowance (600 € in West Africa, 1.200 € in Germany), University inscription fees, insurance and travel costs (fieldwork, international travel to Germany).

## Application Procedure

### 1. Application package

Applicants must hold a MSc/DEA degree (2 years with written thesis) in a field related to the above mentioned research areas with an above average final grade. **Please note:** The date of obtaining your MSc degree must not be more than six years prior to application.

Please provide the following documents in a single PDF file in English language (Submissions consisting of multiple files and those that are incomplete will be rejected). Only complete applications with all parts arranged in the order listed below will be accepted:

1. A cover letter (including a motivation statement, max. 500 words);
2. A detailed curriculum vitae (including academic background, list of publications (if applicable), professional experience, language skills, voluntary work, max. three pages);
3. A summary of the Master's thesis (about 500-1000 words);
4. The applicant must be proficient in the English language and supply a scanned copy of an English proficiency certificate if not from Ghana (TOEFL or IELTS or 1+ year in an environment where the medium of instruction was/is English), B2 is considered the minimum level;
5. Above average study/professional proofs – scanned copies of the following documents:
  - a. the certificate and transcript of records of your recognized 2 years master's degree, listing all subjects and grades;
  - b. the certificate and transcript of records of your recognized Bachelor's degree, listing all subjects and grades;
  - c. certificates of the completion of additional studies, listing all subjects and grades, if applicable;
  - d. scanned copies of certificates of previous professional/vocational experience, if applicable;
6. Two letters of recommendation from former supervisors or external mentors

### 2. Online application form

The application takes place via an online application form. To this end you will need to register with your name and email address on the following website (online survey tool of the University of Kassel, Germany): <https://umfrage.uni-kassel.de/index.php?r=survey/index&sid=569896&lang=en>

Once you have registered, a personalized link will be sent to you by email, with which you can access the online application form. Completing the online application and uploading your application package is possible until the application deadline: 28.06.2022 (24:00 h, CET).

For further information or questions, please contact us at [graefe@uni-kassel.de](mailto:graefe@uni-kassel.de)